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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,132	03/01/2002	Clint J. Bishard	84262.5	4397

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EXAMINER	
LEVITAN, DMITRY	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/087,132	BISHARD, CLINT J.	
	Examiner	Art Unit	
	Dmitry Levitan	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Objections

1. Claim 1 is objected to because of the following informalities: claim limitation "a queuing congestion mechanism" is understood as a queuing congestion device, however changing " a mechanism" to a system or a device will exclude the claim interpretation as a method claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Regarding claim 4 how to discard packets from high priority/first queue based on loading capacity of the lower class priority/second queue.

The specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1- 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu (US 6,480,911).

6. Regarding claims 1, 2, 5-8, 14, 15 and 18, Lu substantially teaches the limitations of claims:

A method and a switch, comprising a plurality of ingress and egress ports connected to telecommunication packet network (network unit 202, comprising a switch 310, shown on Fig. 4, and connected to the incoming and outgoing communication lines 208-215, shown on Fig. 2 and 3 through inherent input and output ports, because the ports are essential for the system operation 3:46-4:22), to provide congestion management at an egress port of the switch (managing the output ports with output queues 312-318 and 4:22-39), comprising

three queues, each having an input an output and a capacity (queues 440, 442 and 444, shown on Fig. 4 and 5 and 4:23-65, each comprising input and output, and buffer thresholds, related to the buffer/queue capacity 7:56-8:29), each operable to receive packets of information of the queue related type at its input that are destined to be communicated to the egress port through its output (queues 440, 442 and 444 supporting one of the classes, second/medium, first/high and third/low classes shown on Fig. 5);

a scheduler to perform operation of receiving the output packets from the queues and communicating the packets to the egress port of the packet switch based on schedule (inherently part of the system, because the system receives packets from the queues based on the assigned queues service class priority 2:35-60 or weight 4:52-60); and

a queue shaper to perform operation to set an adjustable rate in which the packets of the third queue are communicated to the scheduler, wherein the adjustable rate is controlled by a loading of the capacity of the first queue (inherently part of the system, because the system performs weight adjusting operation, wherein all queues, including third, report their soft and hard thresholds 7:55-8:29 and the weight of the first/high queue is adjusted to provide more capacity for the high queue to avoid packet dropping 9:33-10:8).

Lu also teaches trading weight/assigned bandwidth between queues to avoid packet dropping 10:9-16.

Lu does not teach using a switch, wherein the adjustable rate is controlled by a loading of the capacity of the second queue, comprising a switch matrix interconnecting the input and output ports.

Official notice is taken that using switch matrix to interconnect the input and output ports in a packet switch is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using a switch, wherein the adjustable rate is controlled by a loading of the capacity of the second queue, comprising a switch matrix interconnecting the input and output ports to the system of Lu to improve operation of the medium class packets, utilizing the method

disclosed for the high class packets and to incorporate switching matrix in the switch as a well known design solution.

In addition regarding claims 2, 15 and 18, Lu teaches dropping the packets from the third/low class queue based on loading capacity of the medium and high class queues 10:30-40.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add controlling the dropping of low class packets by the loading of the capacity of the second/medium class queue to the system of Lu to improve the system operation with medium class packets by providing them additional buffer space, taken from the buffer space designated for the low class priority packets 10:45-51.

7. Regarding claim 3, Lu teaches dropping packets in the second queue based on the loading capacity of the second queue (dropping packets in any queue where the hard buffer threshold is exceeded 7:55-65).

8. Claim 4 is rejected (as best understood) under 35 U.S.C. 103(a) as being unpatentable over Lu.

Lu substantially teaches the limitations of the claim (see rejections above).

Lu does not teach discarding packets in the first queue based on the loading capacity of the second queue.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add discarding packets in all queues, including the first/high class queue based on the loading capacity of the second/medium class queue to the system of Lu to improve the system operation to avoid the output port overload by discarding all class priority packets including the high class packets.

9. Claims 9-13, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in view of Admitted Prior Art (Application, Background of the Invention, pages 3 and 4).

Lu substantially teaches the limitations of claims 1 and 14 (see the rejection above).

Lu does not teach packets as ATM, IP, Frame Relay, MPLS or Ethernet.

Admitted Prior Art teaches packet networks made of switches utilizing as ATM, IP, Frame Relay, MPLS or Ethernet 3:25-4:8.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add ATM, IP, frame relay, MPLS or Ethernet implementation of the packet switch of Admitted Prior Art to the system of Lu to improve the system compatibility with widely used standards.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7529. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dmitry Levitan
Examiner
Art Unit 2616